



**Shell**

MATERIAL SAFETY DATA SHEET

MSDS NUMBER ▶ 5,060-3

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97002 (11-81)

SECTION I		NAME		24 HOUR EMERGENCY ASSISTANCE			
PRODUCT ▶	Methyl Isobutyl Ketone	SHELL	713-473-9461	 HEALTH	2		
CHEMICAL/ SYNONYMS ▶	MIBK, 4-methyl-2-pentanone	CHEMTREC	800-424-9300			 FIRE	3
CHEMICAL FAMILY ▶	Ketone						
SHELL CODE ▶	31135	C.A.S. NUMBER ▶	108-10-1				

HAZARD RATING

LEAST	0	▶	SLIGHT	1	▶
MODERATE	2	▶	HIGH	3	▶
			EXTREME	4	

SECTION II		INGREDIENTS	
COMPOSITION	%	TOXICITY DATA	
Methyl Isobutyl Ketone	100	Oral LD ₅₀ (rat) = 2.08g/kg	
		Dermal LD ₅₀ (rabbit) = >20ml/kg	
		Inhalation LC ₅₀ (rat) = 2,000-6,000ppm/4 hours	

SECTION III	HEALTH INFORMATION
<p>Liquid is irritating to the eyes.</p> <p>Prolonged or repeated contact of liquid with skin can cause dryness and irritation.</p> <p>Breathing high vapor concentrations or prolonged exposure to vapors can cause irritation of the eyes, nose and throat and may cause headache, dizziness, nausea and unconsciousness.</p>	

SECTION IV	OCCUPATIONAL EXPOSURE LIMITS
<p>OSHA PEL and ACGIH TLV = 100ppm or 410mg/m³ TWA (8-hour workday)</p> <p>ACGIH TLV = 125ppm or 510 mg/m³ STEL</p>	



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SECTION V**EMERGENCY AND FIRST AID PROCEDURES**

INHALATION: Remove victim to fresh air. Give artificial respiration if not breathing. Get medical attention.

EYE CONTACT: Flush eyes immediately with large amounts of water for at least 15 minutes. Get medical attention.

SKIN CONTACT: Wash with soap and water. Remove contaminated clothing and do not reuse until they have been laundered.

INGESTION: Give large amounts of water, then induce vomiting by touching back of throat with finger. Get medical attention.

SECTION VI**PHYSICAL DATA**

BOILING POINT (°F) ▶ 241	MELTING POINT (°F) ▶ -118	VAPOR PRESSURE (mmHg) ▶ 15@68°F
SPECIFIC GRAVITY (H ₂ O=1) ▶ 0.81@60/60°F	% VOLATILE BY VOLUME ▶ 100	VAPOR DENSITY (AIR=1) ▶ 3.5
SOLUBILITY IN WATER ▶ Moderate	EVAPORATION RATE (BUTYL ACETATE=1) ▶ 1.6	

APPEARANCE AND ODOR

Colorless, mobile liquid. Pleasant odor.

SECTION VII**FIRE AND EXPLOSION HAZARDS**

FLASH POINT AND METHOD USED	FLAMMABLE LIMITS/% VOLUME IN AIR ▶	LOWER	UPPER
60°F (TCC)		1.4	7.5

EXTINGUISHING MEDIADry chemical, "alcohol" foam, CO₂, water spray or fog.**SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS**

Do not enter confined fire space without proper protective equipment including NIOSH approved self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Treat as a flammable liquid.



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SECTION VIII**REACTIVITY**STABILITY ▶ ☐ UNSTABLE ☒ STABLEHAZARDOUS POLYMERIZATION ▶ ☐ MAY OCCUR ☒ WILL NOT OCCUR**CONDITIONS AND MATERIALS TO AVOID**

Keep away from heat, sparks and open flames. No smoking. Reacts with strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide can form upon incomplete combustion.

SECTION IX**EMPLOYEE PROTECTION****RESPIRATORY PROTECTION**

Use NIOSH approved respiratory protection equipment as required to prevent overexposure.

PROTECTIVE CLOTHING

Use goggles if material can be sprayed or splashed into the eyes. Wear impervious gloves and appropriate protective clothing to prevent skin contact.

ADDITIONAL PROTECTIVE MEASURES

Use in well ventilated areas.

SECTION X**ENVIRONMENTAL PROTECTION****SPILL OR LEAK PROCEDURES**

Eliminate all sources of ignition immediately and evacuate the area. Be prepared for fire.

Wear appropriate protective clothing and respiratory protection equipment when entering the spill area. Shut off leak if it can be done safely. Ventilate the area. Dike and pump off large spills into salvage or storage containers. Take up residue or small spills with absorbent material such as clay or vermiculite. Scoop up all contaminated soil and dispose of in same manner as the product. See Section XIII.

WASTE DISPOSAL

Handle waste material in accordance with RCRA requirements. See Section XIII.

ENVIRONMENTAL HAZARDS

Do not allow product to enter storm or sanitary sewers, lakes, rivers, streams or public water supplies. Notify local authorities if this happens or is threatened.



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SECTION XI**SPECIAL PRECAUTIONS**

MIBK is a volatile, flammable liquid.

Keep away from any source of ignition such as heat, sparks and open flame.
Ground all containers when pouring or transferring liquid.

Store in tightly closed containers in a cool, well ventilated area.

Do not eat or smoke in areas where this product is handled processed or stored. Wash up with soap and water before eating, smoking, or using toilet facilities.

SECTION XII**TRANSPORTATION REQUIREMENTS**

DEPARTMENT OF TRANSPORTATION CLASSIFICATION	<input checked="" type="checkbox"/> FLAMMABLE LIQUID	<input type="checkbox"/> COMBUSTIBLE LIQUID	<input type="checkbox"/> OXIDIZING MATERIAL	<input type="checkbox"/> NON-FLAMMABLE GAS
	<input type="checkbox"/> FLAMMABLE SOLID	<input type="checkbox"/> POISON, CLASS A	<input type="checkbox"/> CORROSIVE MATERIAL	<input type="checkbox"/> NOT HAZARDOUS BY D.O.T. REGULATIONS
	<input type="checkbox"/> FLAMMABLE GAS	<input type="checkbox"/> POISON, CLASS B	<input type="checkbox"/> IRRITATING MATERIAL	<input type="checkbox"/> OTHER—Specify below

D.O.T. PROPER SHIPPING NAME

Flammable Liquid, N.O.S.

OTHER REQUIREMENTS

D.O.T. I.D. Number UN 1993. Guide Sheet 26.

SECTION XIII**OTHER REGULATORY CONTROLS**

EPA, FDA, OSHA, USDA, CPSC, etc.

EPA - Resource Conservation and Recovery Act (RCRA)

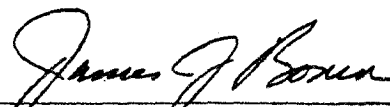
Methyl Isobutyl Ketone has been designated by the EPA (RCRA 40 CFR 261.33) as a hazardous waste if it is spilled, discarded or intended to be discarded as is. The EPA hazardous waste number is U161.

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

Come to
Shell for answers




Manager
SHELL OIL COMPANY
PRODUCT SAFETY AND COMPLIANCE
OIL AND CHEMICAL PRODUCTS
P.O. BOX 4320
HOUSTON, TEXAS 77210

DATE PREPARED

March 09, 1981